BULLETIN

OF THE INSTITUTE OF METALS

VOLUME 2 JULY 1955 PART 23

INSTITUTE NEWS

Extraordinary General Meeting

NOTICE IS HEREBY GIVEN that an EXTRAORDINARY GENERAL MEETING of the Members of THE INSTITUTE OF METALS will be held at the Palace Hotel, BUXTON, on Thursday the twenty second day of September 1955 at 9.15 o'clock in the forenoon for the purpose of considering and, if thought fit, passing the following Resolution as a Special Resolution.

SPECIAL RESOLUTION

THAT the Articles of Association of the Institute be amended in manner following, that is to say :—

(*a*) In Article 5 by the deletion of the word " or " and the insertion after the words " Student Members " of the words " or Overseas Sustaining Members ".

(*b*) In Article 6 by the insertion immediately prior to the ultimate paragraph of such Article of the following new paragraphs :—

Overseas Sustaining Members shall be such bodies corporate having their headquarters or principal places of business outside the United Kingdom of Great Britain and Northern Ireland and desiring to give financial support to the objects and work of the Institute, as the Council in its absolute discretion shall admit as Overseas Sustaining Members. The decision of the Council on the question of eligibility for admission as an Overseas Sustaining Member shall be final.

An Overseas Sustaining Member shall be entitled to nominate not more than two individuals for membership of the Institute and further individuals from time to time in place of any such nominee not being elected or ceasing to be a nominated Member provided that an individual so nominated must be eligible for election as an Ordinary Member, Junior Member, or Student Member and shall submit a signed application for memberhip and shall be subject to election by the Council in accordance with these Articles.

An Overseas Sustaining Member shall not be qualified for election to the Council. An Overseas Sustaining Member shall neither be entitled to receive notice of nor to attend nor vote at any General Meeting of the Institute nor to vote upon a ballot. Save as herein otherwise provided, a Member nominated by an Overseas Sustaining Member shall have all the rights and privileges and shall be subject to the conditions appertaining to the class of membership to which he shall be admitted. Save as aforesaid, during any period in which there shall be no individual Member nominated by a particular Overseas Sustaining Member, then such Overseas Sustaining Member shall have all the rights and privileges and shall be subject to the conditions appertaining to an Ordinary Member.

A Member nominated by an Overseas Sustaining Member shall be entitled at any time during membership to elect by notice in writing to the Council as from the date of service of such notice to continue in membership in his own right and in all respects as if he were not a nominated member.

All nominations by an Overseas Sustaining Member and revocations of such nominations shall be made in writing under the hand of an officer duly authorized in that behalf by the Board of Directors or equivalent governing body of such Overseas Sustaining Member.

(*c*) In Article 8 by the deletion of the word " or " where it first occurs and the insertion after the words " Student Members " of the words " or Overseas Sustaining Members ".

(*d*) In Article 9 by the insertion of the following new paragraph to be numbered 9 (b) and the renumbering of the existing paragraphs 9 (b), 9 (c), and 9 (d) to read 9 (c), 9 (d), and 9 (e) respectively :—

(b) Unless and until otherwise determined by the Council or provided by the bye-laws, each Overseas Sustaining Member shall pay a minimum annual subscription of £25. Such subscription shall be deemed to include the annual subscription of the individual Member or Members nominated by such Overseas Sustaining Member.

(*e*) In Article 15 by the insertion of the following new paragraph to be lettered (f) :—

(f) If, in the case of a Member nominated by an Overseas Sustaining Member, such Overseas Sustaining Member shall give to the Council and to the nominated Member not less than fourteen days' notice in writing revoking such nomination or if

the Overseas Sustaining Member shall cease to be a Member of the Institute.

(f) In Article 55 by the insertion of the following words at the commencement of the Article:

"Subject as hereinbefore provided as to Overseas Sustaining Members".

DATED the nineteenth day of May, 1955.

By Order of the Council.

S. C. GUILLAN.
Secretary.

Registered Office:
4 Grosvenor Gardens,
London, S.W.1.

limits for Student Membership, viz. 17 to 25 years. The competition is not restricted to persons who are undergoing courses at a University or Technical College; it is open to all persons within the age limit stated. A prizewinner will be ineligible to take part in the competition in the year subsequent to that in which he or she submitted a winning essay.

(2) *Language.*—Essays must be submitted in English.

(3) *Length.*—Essays should be 2500–3500 words long and must not exceed 3500 words. They must be submitted in typewritten form with double-line spacing.

(4) *Subject.*—The choice of subject is left to the competitors, except that subjects relating exclusively to extraction or ferrous metallurgy are ineligible. The subject matter should be logically presented, in good English, and *should have a metallurgical content to impress the adjudicators by soundness, exercise of critical faculty, and originality of approach.* No prize will be awarded if the essays do not, in the opinion of the adjudicators, reach the requisite standard.

(5) *Method of Submission.*—Each entry must be submitted to The Secretary, The Institute of Metals, 4 Grosvenor Gardens, London, S.W.1, not later than 1 January 1956, and must be accompanied by a certificate, signed by the entrant, that the essay itself is entirely his or her own work, that it has not, in the form in which it has been sent, been submitted for any other competition, and clearly stating what (if any) drawings, photographs, &c., have been prepared on his or her behalf.

(6) *Presentation of Prizes.*—The prizewinners will receive their prizes from the President, when he presents the Medals awarded by the Institute, at the 1956 Spring Meeting.

MEMBERSHIP

As the Institute's financial year begins on 1 July, the present is an especially good time at which to join the Institute.

The Secretary will be glad to send to members who wish to introduce new members, or to intending applicants, printed forms of application and particulars of membership.

The total membership on 2 June 1955 was 4427, a net increase of 192 since 1 July 1954.

Fellow

The Council has elected Mr. G. SHAW SCOTT, M.Sc., F.C.I.S., Secretary-Emeritus, to be a Fellow of the Institute in recognition of his work for the Institute, particularly in the early years of its foundation. A photograph of Mr. Shaw Scott, with some biographical notes, will appear in the next issue of the *Bulletin*.

Students' Essay Prizes 1955

Regulations

The Council will present two prizes of twenty-five and fifteen guineas, respectively, for the two best essays submitted in accordance with the regulations set out below. Half of each prize will be in the form of money and half in the form of scientific, technical, or other appropriate types of books, to be selected by the prizewinner. If of sufficient merit, a prize-winning essay may be published in the Institute's *Bulletin* or selected for reading before a Local Section.

(1) *Eligibility.*—The competition is open to all Student Members of the Institute, to all Associate Members of Local Sections, and to all members of Associated Societies (Leeds Metallurgical Society, Liverpool Metallurgical Society, Manchester Metallurgical Society, and North-East Metallurgical Society) who are eligible for Student Membership of the Institute, provided that they are within the normal age

Annotated Equilibrium Diagram: Cadmium–Zinc System

This Annotated Equilibrium Diagram (No. 12 in the series) has now been published. It has been prepared by Mr. J. Lumsden of the National Smelting Co., Ltd. Copies may be obtained at the following prices (post free):

Members (one copy only at)	1*s.* 0*d.* or $0.40
Non-members	2*s.* 0*d.* or $0.50
Libraries	1*s.* 8*d.* or $0.40

Committees for 1955–56

Finance and General Purposes Committee

JONES, Mr. E. H. (*Chairman*).
BOND-WILLIAMS, Mr. N. I.
DOREY, Dr. S. F.
GRIMSTON, The Hon. John.
HAMER, Mr. R. D.
RAMSAY, Dr. A. G.
SMITHELLS, Dr. C. J.
THOMPSON, Professor F. C.

Ex-officio :

COOK, Dr. Maurice (*President*).
BALL, Major C. J. P. (*Senior Vice-President*).
COLQUHOUN, Mr. J. C. (*Honorary Treasurer*).
TEED, Major P. L. (*Chairman, Publication Committee*).

Library Committee

CHASTON, Dr. J. C. (*Chairman*).
CHILTON, Mr. L. V.
FULLMAN, Mr. B.
GUILLAN, Lieut.-Colonel S. C.
PARKER, Miss E. W.

Local Sections Committee

PFEIL, Dr. L. B. (*Chairman*).
ASHTON, Mr. A. B.
GARSIDE, Dr. J. E.
KENNETT, Dr. S. J.

Ex-officio :

COOK, Dr. Maurice (*President*).
BALL, Major C. J. P. (*Senior Vice-President*).
COLQUHOUN, Mr. J. C. (*Honorary Treasurer*).
SMITH, Mr. S. S. (*Chairman, Birmingham Local Section*).
MATTHEWS, Mr. A. W. (*Honorary Secretary, Birmingham Local Section*).
CHASTON, Dr. J. C. (*Chairman, London Local Section*).
KNIGHT, Mr. J. R. (*Honorary Secretary, London Local Section*).
MURRAY, Mr. G. (*Chairman, Oxford Local Section*).
PEARCE, Mr. R. (*Honorary Secretary, Oxford Local Section*).
DUNLOP, Mr. W. A. (*Chairman, Scottish Local Section*).
HAY, Mr. Matthew (*Honorary Secretary, Scottish Local Section*).
EDWARDS, Dr. A. (*Chairman, Sheffield Local Section*).
MACDOUGALL, Mr. A. J. (*Honorary Secretary, Sheffield Local Section*).
WALTON, Mr. J. S. (*Chairman, South Wales Local Section*).
DENNISON, Dr. J. P. (*Honorary Secretary, South Wales Local Section*).

Metal Physics Committee

RAYNOR, Professor G. V. (*Chairman*).
AXON, Dr. H. J.
BAILEY, Dr. G. L. J.
CHRISTIAN, Dr. J. W.
FINNISTON, Dr. H. M.
FORSYTH, Mr. P. J. E.
FRANK, Dr. F. C.
GEACH, Dr. G. A.
HANSTOCK, Dr. R. F.
KING, Dr. R.
NUTTING, Dr. J.
OLIVER, Mr. D. A. (representing the Iron and Steel Institute and the British Iron and Steel Research Association).
O'NEILL, Professor H.
RICHARDS, Dr. T. Ll.
RICHARDSON, Dr. F. D.
WAKEMAN, Dr. D. W.

Ex-officio :

COOK, Dr. Maurice (*President*).
TEED, Major P. L. (*Chairman, Publication Committee*).

Metallurgical Engineering Committee

THOMAS, Mr. W. J. (*Chairman*).
BAKER, Dr. W. A.
BOLTON, Mr. E. A.
BOND-WILLIAMS, Mr. N. I.
BOWMAN, Mr. W. H.
CAMPBELL, Mr. D. F.
DAVIES, Mr. C. E.
FORD, Professor H.
LAKE, Mr. N. C.
MILLER, Mr. H. J.
PATON, Mr. C. P.
SALTER, Mr. J.
SINGER, Dr. A. R. E.
SMITH, Mr. Christopher
WALTON, Mr. J. S.
WILKINSON, Mr. R. G.

Ex-officio :

COOK, Dr. Maurice (*President*).
TEED, Major P. L. (*Chairman, Publication Committee*).

Publication Committee

TEED, Major P. L. (*Chairman*).
BAKER, Dr. W. A.
CHRISTIAN, Dr. J. W.
CROWTHER, Mr. J.
CUTHBERTSON, Professor J. W.
FINNISTON, Dr. H. M.
FORD, Professor H.
HUDSON, Mr. F.
JENKINS, Dr. Ivor.
KEE, Mr. W. W.
KING, Dr. R.
MAKOWER, Mr. A.
PARKER, Dr. R. T.
PHILLIPS, Mr. H. W. L.
POWELL, Mr. A. R.
SHOWELL, Mr. D. W. D.
SMITH, Mr. S. S.
WALTERS, Mr. B.

Ex-officio :

COOK, Dr. Maurice (*President*).
JONES, Mr. E. H. (*Chairman, Finance and General Purposes Committee*).
COLQUHOUN, Mr. J. C. (*Honorary Treasurer*).
PFEIL, Dr. L. B. (*Chairman, Local Sections Committee.*)
RAYNOR, Professor G. V. (*Chairman, Metal Physics Committee*).
THOMAS, Mr. W. J. (*Chairman, Metallurgical Engineering Committee*).

The constitution of certain Committees is fixed by standing orders of the Council, as follows:

Medal Committee

PRESIDENT (*Chairman*).
SENIOR VICE-PRESIDENT

and

Not more than four Institute of Metals (Platinum) Medallists who are, or have been, members of the Council (to be selected by the President), with power to the President to co-opt not more than two other persons.

Nominations Committee

PRESIDENT.
TWO IMMEDIATE PAST-PRESIDENTS.
SENIOR VICE-PRESIDENT.

Staff Committee

PRESIDENT.
SENIOR VICE-PRESIDENT.
CHAIRMAN, FINANCE AND GENERAL PURPOSES COMMITTEE.
HONORARY TREASURER.

Local Section Officers and Committees for Session 1955–56

Birmingham Local Section

Chairman: S. S. Smith, M.Met., F.I.M.
Vice-Chairman and Representative on Co-ordinating Committee: H. W. G. Hignett, B.Sc., F.R.I.C., F.I.M.
Hon. Secretary: A. W. Matthews, A.I.M.
Asst. Hon. Secretary: L. G. Tottle, A.R.Ae.S., L.I.M.
Hon. Treasurer: R. Chadwick, M.A., F.R.I.C., F.I.M.
Past-Chairmen: B. Thomas, F.Inst.P., A.I.M.; E. A. Bolton, M.Sc., F.I.M.; H. H. Symonds, F.I.M.
Ordinary Members: L. H. Fairbank, B.Sc., A.I.M.; C. E. Homer, Ph.D., B.Sc., F.I.M.; W. H. L. Hooper, B.Sc., A.I.M.; J. W. Jenkin, Ph.D., B.Sc., F.I.M.; A. R. E. Singer, Ph.D., B.Sc.; I. G. Slater, Ph.D., M.Sc., F.I.M.

London Local Section

Chairman: J. C. Chaston, Ph.D., B.Sc., A.R.S.M., F.I.M.
Vice-Chairman: E. C. Rhodes, Ph.D., B.Sc., F.R.I.C., F.I.M.
Hon. Secretary: J. R. Knight, B.Sc., A.I.M.
Hon. Treasurer: E. G. V. Newman, B.Sc., A.R.S.M., A.R.I.C., F.I.M.
Past-Chairmen: E. A. G. Liddiard, M.A., F.I.M.; W. F. Randall, B.Sc., A.R.S.M., F.I.M.; C. E. Ransley, Ph.D., M.Sc., F.I.M.
Ordinary Members: G. L. J. Bailey, Ph.D., B.Sc., A.R.C.S., D.I.C., F.Inst.P.; J. A. Catterall, Ph.D., B.Sc., A.R.S.M.; R. G. Harper, M.Sc.; Ivor Jenkins, D.Sc., F.I.M.; E. C. J. Marsh, B.Sc., F.R.I.C., F.I.M.; W. K. B. Marshall, B.Eng., A.I.M.

Oxford Local Section

Chairman: G. Murray, M.Sc., F.I.M.
Vice-Chairmen: W. Hume-Rothery, O.B.E., D.Sc., F.R.S.; G. L. Hopkin, F.I.M.
Hon. Secretary: R. Pearce, B.A., B.Sc.
Hon. Treasurer: J. C. Arrowsmith, M.Met.
Past-Chairman: R. T. Parker, Ph.D., B.Sc., A.R.S.M., F.R.I.C., F.I.M.
Ordinary Members: R. C. Ansell, B.Sc.; A. T. Churchman, Ph.D., B.Sc.; G. C. Ellis; A. Hellawell, B.A.; W. B. H. Lord, M.A., M.Sc.; F. Martin; A. A. Pearson, A.I.M.; R. E. Smallman, Ph.D.; A. E. W. Smith, Ph.D., B.Sc., F.I.M.; A. N. Turner, Ph.D., B.Sc., A.R.S.M., A.I.M.

Scottish Local Section

Chairman: W. A. Dunlop.
Vice-Chairman: H. Harris, Ph.D., B.Sc., A.R.C.S., D.I.C.
Hon. Secretary: Matthew Hay.
Hon. Treasurer: N. J. MacLeod.
Past-Chairmen: John Arnott, F.R.I.C., F.I.M.; E. A. Fowler, B.Sc., A.R.T.C.; G. MacDonald, O.B.E., B.Sc., A.M.I.C.E., M.I.Mech.E.
Ordinary Members: H. B. Bell, B.Sc., A.R.T.C.; R. E. Buttress (representing Associates); E. G. Flack; N. MacDonald (representing Associates); H. S. S. Murray; H. J. Stuart; A. L. Wakeling.

Sheffield Local Section

Chairman: A. Edwards, Ph.D., B.Sc., F.I.M.
Vice-Chairman: Z. Stokowiec, A.M.I.Mech.E., F.I.M.
Hon. Secretary and Treasurer: A. J. MacDougall, M.Met., F.I.M.
Past-Chairmen: M. M. Hallett, M.Sc., F.I.M.; W. R. Maddocks, Ph.D., B.Sc.
Ordinary Members: R. B. Argent, B.Met.; T. B. Bowker; H. Gadsby, A.Met.; Professor R. W. K. Honeycombe, Ph.D., M.Sc.; B. J. Nield, B.Met.; Professor A. G. Quarrell, D.Sc., Ph.D., A.R.C.S., F.Inst.P., F.I.M.; B. C. Woodfine, Ph.D., B.Met.

South Wales Local Section

Chairman: J. S. Walton, F.I.M.
Hon. Secretary: J. P. Dennison, Ph.D., B.Sc.
Hon. Treasurer: P. J. Liptrot, M.Eng., A.I.M.
Past-Chairmen: E. A. Hontoir, B.Sc., A.I.M.; D. W. Hopkins, M.Sc., F.I.M.; K. M. Spring, A.I.M.
Ordinary Members: P. W. A. Cunniffe; P. Evans (representing Student Members); C. F. J. Francis-Carter, O.B.E., F.R.I.C., F.I.M.; R. H. Humphries (representing Associate Members); H. C. Hulme; Professor H. O'Neill, D.Sc., M.Met., F.I.M.; G. H. H. Williams (representing Junior Members).

Election of Members

The following 29 Ordinary Members, 1 Junior Member, and 3 Student Members were elected on 2 June 1955:

As Ordinary Members

AHMAD, Zia Uddin, Manager and Chief Metallurgist, Crown Engineering Works, 86 Railway Road, Lahore, Pakistan.

ANDERSON, Paul Herman, B.Sc., M.S., Ph.D., Head, Department of Metallurgical Engineering, South Dakota School of Mines and Technology, Rapid City, S.D., U.S.A.

ATTRILL, William Hugh, A.C.T. (Birm.), A.I.M., Deputy Chief Metallurgist, McKechnie Brothers, Ltd., Rotton Park Street, Birmingham.

BASTOW, Jack, B.Met., Metallurgist, The English Electric Co. Ltd., Rugby.

BENNETT, Kenneth, A.M.C.T., A.I.M., Metallurgist, The Chloride Electrical Storage Co., Ltd., Central Research and Development Department, Clifton Junction, Swinton, Lancs.

BINKLEY, Victor Fred, B.Met.E., M.S., Chief Metallurgist, Kaiser Aluminum and Chemical Corp., Trentwood Works, Spokane 69, Wash., U.S.A.

DEW, Sidney Bernard, A.I.M., General Manager and Metallurgist, H. J. Maybrey and Co., Ltd., Worsley Bridge Road, London, S.E.26.

DIXON, Edgar O., Vice-President, Ladish Company, Cudahy, Wis., U.S.A.

DOAN, Donald J., M.S., Ph.D., Chief, Metallurgical Section, Research Laboratories, The Eagle-Picher Company, Joplin, Mo., U.S.A.

FANNON, Robert, Development Engineer, S.T.S. Department, The British Oxygen Co., Ltd., North Circular Road, Cricklewood, London, N.W.2.

GIANOLA, Cornelio, Metallurgist, S.A.F.I.I. Ingg. De Bartolomeis, Via Settembrini 7, Milano, Italy.

GILMAN, John Joseph, M.S., Ph.D., Research Associate, General Electric Research Laboratory, The Knolls, Schenectady, N.Y., U.S.A.

GOHN, George Rice, A.B., B.S., Met.E., Supervisor, Creep and Fatigue Laboratories, Bell Telephone Laboratories, Inc., 463 West Street, New York 14, N.Y., U.S.A.

GURINSKY, David Harris, B.S., Ph.D., Head, Metallurgy Division, Brookhaven National Laboratory, Associated Universities, Inc., Upton, L.I., N.Y., U.S.A.

HALE, Stanley, M.Sc., Metallurgist, Federated Metals Canada, Ltd., East Don Roadway, Toronto 8, Canada.

HUREL, Georges Alfred, Ing. E.N.S.C.P., B.ès Sci., Ingénieur en Chef, Société Alsacienne de Constructions Mécaniques, 32 rue de Lisbonne, Paris (8e), France.

JORE, Olav, Chem.Eng., Chemical Engineer, Porsgrund Metalverk A/S, Porsgrunn, Norway.

LOCKE, Saul Robert, B.S., M.Met.Eng., Metallurgical Engineer, Cooper Union School of Engineering and Bulova Research and Development Laboratories, New York City, N.Y., U.S.A.

LYCETT, Reginald Charles, L.I.M., Senior Metallurgist, Accles and Pollock, Ltd., Oldbury, near Birmingham.

MERCHANT, Herbert Joseph, F.I.M, Works Manager, Australian Forge and Engineering Pty., Ltd., P.O. Box 20, Lidcombe, Sydney, N.S.W., Australia.

NORRÖ, Allan Ferdinand, General Superintendent (Copper Works), Bolidens Gruvaktiebolag, Skelleftehamn, Sweden.

ROLLE, Sidney, Consulting Metallurgical Engineer, 420 Lexington Avenue, New York 17, N.Y., U.S.A.

SATTERTHWAITE, Howard G., B.S., Manager, Anaconda Aluminum Company, Columbia Falls, Mont., U.S.A.

SCHUHMANN, *Professor* Reinhardt, Jr., D.Sc., Professor of Metallurgical Engineering and Chairman, Metallurgical Engineering Division, School of Chemical and Metallurgical Engineering, Purdue University, Lafayette, Ind., U.S.A.

SCHWARZKOPF, Alex. J., M.S., Metallurgist, Wright Aero Division, Curtiss Wright Corp., Wood-Ridge, N.J., U.S.A.

SIMS, Chester Thomas, M.S., Principal Metallurgist, Battelle Memorial Institute, Columbus 12, Ohio, U.S.A.

UNTERWEISER, Paul M., B.S., Editor, *The Iron Age*, 100 East 42nd Street, New York, N.Y., U.S.A.

WOODS, Stephen Esslemont, M.A., D.Phil., Development Manager, Imperial Smelting Corporation, Ltd., Avonmouth.

ZAPP, Frederick M., B.S., Chemical Engineer and Metallurgist, S. W. Farber, Inc., 415 Bruckner Boulevard, Bronx, N.Y., U.S.A.

As Junior Member

GETTINGS, George William, L.I.M., Metallurgist, Accles and Pollock, Ltd., Oldbury, near Birmingham.

As Student Members

CRANIDGE, John Curtis, Apprentice Metallurgist, Ransome and Marles Bearing Co., Ltd., Newark-on-Trent, Notts.

MELLOR, Edward John, Undergraduate, Department of Metallurgy, University College, Cardiff.

NOVAK, Robert Leonard, Student, Department of Metallurgical Engineering, University of Pennsylvania, Philadelphia, Pa., U.S.A.

PERSONAL NOTES

MR. G. L. BAILEY has been elected a Vice-President of the Institution of Metallurgists.

MR. Z. S. BASINSKI has been awarded the M.A. and D.Phil. degrees of Oxford University. He is now at the Department of Cryogenic Engineering, Massachusetts Institute of Technology.

DR. F. P. BOWDEN has been appointed Chief Research Consultant and placed in charge of the Research Laboratories of Tube Investments, Ltd., Hinxton Hall, Cambridge.

PROFESSOR G. CHAUDRON has been awarded an honorary degree of Ferrara University.

MR. F. DICKINSON has been appointed Manager of the Development and Research Department of The Mond Nickel Co., Ltd.

DR. A. G. DOWSON has been appointed Professor of Metallurgy at the Royal Naval College, Greenwich.

MR. M. H. FARMER has left the National Physical Laboratory to join the Research and Development Department, Associated Ethyl Co., Ltd., Northwich, Cheshire.

MR. F. W. GLASER has been appointed a Vice-President and Director of the Alloy Precision Castings Company, Cleveland, Ohio.

MR. J. O. HITCHCOCK has been appointed Sales Director of The Mond Nickel Co., Ltd.

DR. S. L. HOYT has been awarded the D.Sc. degree of the South Dakota School of Mines and Technology, Rapid City, S.D.

DR. W. HUME-ROTHERY has been awarded the Honorary D.Sc. degree of Manchester University.

DR. IVOR JENKINS has been elected a Vice-President of the Institution of Metallurgists.

DR. W. A. JOHNSON has left the Westinghouse Electric Corp., to become Associate Director, Research and Development, Thompson Products, Inc., Cleveland, O.

PROFESSOR G. LETENDRE has been elected Director of the Quebec Board of Trade.

DR. G. LUCAS has been awarded the Saville Shaw Medal of the Newcastle-upon-Tyne Section of the Society of Chemical Industry, for research work carried out at King's College, Newcastle.

Dr. R. Maddin, Associate Professor of Metallurgy at the Johns Hopkins University, Baltimore, has been appointed Professor of Metallurgy in the School of Metallurgical Engineering, University of Pennsylvania, Philadelphia 4, Pa.

Mr. William E. Mahin has been appointed Vice-President and Director of Research to the Hunter Engineering Co., Riverside, Calif.

Mr. S. E. Mayer has left Standard Telephones and Cables, Ltd., and taken a post with Transitron Electronic Corp., Melrose, Mass., U.S.A.

Mr. M. D. Payne has been appointed Assistant Metallurgist with Humber, Ltd., Coventry.

Dr. T. G. Pearson has been appointed Director of Research to The British Aluminium Co., Ltd. He was previously Assistant Director.

Dr. L. B. Pfeil has relinquished the Managership of the Development and Research Department of The Mond Nickel Co., Ltd., in order to devote himself more fully to his duties as a Director of the Company.

Mr. E. Robson has been appointed Deputy Managing Director of The Manganese Bronze and Brass Co., Ltd.

Mr. H. E. Slocombe has left C.A.V., Ltd., and is now with Wilmot Breden, Ltd., Bridgwater, Somerset.

Mr. W. A. Smith has been appointed Works Manager, Stewarts and Lloyds, Ltd., Tollcross Works, Glasgow.

Dr. C. J. Smithells has been appointed Managing Director of Magnesium Elektron, Ltd. He is succeeded as Director of Research of The British Aluminium Co., Ltd., by Dr. T. G. Pearson.

Professor F. C. Thompson has been elected President of the Institution of Metallurgists for the year 1955–56.

Dr. Robert F. Thomson has been awarded the John A. Penton Gold Medal of the American Foundrymen's Society " for outstanding contributions to the Society and the industry in foundry research, particularly in the field of light metals ". Dr. Thomson is Head of the Metallurgy Department, Research Laboratories Division, General Motors Corp., Detroit, Mich.

Dr. E. G. West has been elected Honorary Treasurer of the Institution of Metallurgists.

OBITUARY

Mr. R. T. Priestman

We regret to announce the death of Mr. Robert Thomas Priestman, Governing Director of T. J. Priestman, Ltd., Birmingham, on 2 May, aged 54.

After completing his education at Wrekin College, Mr. Priestman joined The Birmingham Aluminium Casting (1903) Co., Ltd. He entered the family business of aluminium alloy manufacturers in 1920, becoming Governing Director on the death of his father, Mr. T. J. Priestman, in 1938.

Mr. Priestman was a Council Member of the Aluminium Industry Council, a Past-President of the Aluminium Development Association, and a former Chairman of the Federation of Light Metal Smelters and of Alar, Ltd. He joined the Institute in 1933.

LETTER TO THE EDITOR

Attempts to Improve Aluminium Reduction Since Héroult and Hall

I would like to correct a minor error in the excellent Autumn Lecture of Professor von Zeerleder, published in the March issue of your *Journal*. Contrary to what is stated on p. 326, neither Mr. William Hoopes nor Mr. Anson G. Betts was an assistant of Mr. Hall. Mr. Hoopes was Chief Electrical Engineer of the Aluminum Company of America and was largely responsible not only for the invention but also for the commercialization of aluminium cable steel-reinforced. Mr. Betts was an independent inventor, not connected in any way with the Aluminum Company of America, who was probably best known for his electrolytic refining process for producing pure metallic lead. This process used a lead fluosilicate solution and was commercially operated for many years at East Chicago, Ill.

Incidentally, when we undertook the practical development of the electrolytic refining of aluminium in 1921, Mr. Hoopes told me (before we had found Mr. Betts' patent) that his original idea involved the so-called three-layer process in which pure aluminium floats on a heavy molten bath containing cryolite, underlain by a heavier anode alloy containing aluminium. However, Mr. Hall felt that this would be too difficult to try out in the plant, so the arrangement shown in Mr. Hoopes' patent was the one actually and successfully tried, but nothing further was done with it except to patent it.

Francis C. Frary

Aluminum Company of America,
New Kensington, Pa., U.S.A.

NEWS OF KINDRED SOCIETIES

Australian Institute of Metals

The following officers were recently elected:

President: Professor H. K. Worner.
Vice-Presidents: Mr. A. Ashton and Mr. L. C. Bogan.
Acting Honorary Secretary: Mr. J. G. Ritchie.
Honorary Treasurer: Mr. E. D. Connor.

Institution of Mining and Metallurgy

The Rt. Hon. Sir Winston S. Churchill, K.G., O.M., C.H., has accepted Honorary Membership of the Institution.

The Gold Medal of the Institution has been awarded to Emeritus Professor W. R. Jones, C.B.E., D.Sc., Past-President, in recognition of his services to the science of economic geology and to the Institution.

OTHER NEWS

Symposium on Corrosion, Melbourne

A Symposium on Corrosion will be held at the University of Melbourne in December this year. A committee, representative of interested scientific bodies, has been formed under the chairmanship of Professor H. K. Worner, and arrangements are well advanced.

About thirty papers will be presented, covering fundamentals, prevention, buried and immersed corrosion, corrosion in industry, in the oil industry, and in power production. The Secretary of the committee is Mr. G. M. Willis, Metallurgy Department, University of Melbourne, Carlton N.3, Vic., Australia.

Residential Course on "The Fatigue of Metals"

A week's residential course on the fatigue of metals is being held at the University of Nottingham from Monday, 12 September, until Friday, 16 September, inclusive. The course has been organized by a joint committee of industry and the engineering departments of the University, under the chairmanship of Mr. G. Forrest (Aluminium Laboratories, Ltd.).

It is intended that the course shall present the known facts concerning the fatigue of metals to the practising engineer, and, although no formal academic qualifications are required for enrolment, it will be assumed that those attending the course will possess either a degree or the Higher National Certificate in engineering or science.

The subjects to be covered are: the fundamentals of fatigue, the fatigue properties of steels and cast iron, the fatigue properties of non-ferrous alloys, corrosion-fatigue and fretting corrosion, fatigue of aircraft, and fatigue testing.

Residential accommodation for 100 people will be provided in Hugh Stewart Hall, which is situated in the University Park.

All enquiries regarding the course should be addressed to: The Secretary, Fatigue of Metals Course, Departments of Civil and Mechanical Engineering, University of Nottingham.

Metallurgy at Oxford

Congregation at Oxford University recently agreed to the establishment of an honours course in metallurgy. A decree was approved authorizing the curators of the University Chest to accept contributions to a fund for the development of the study, which was estimated to cost between £95,000 and £100,000.

The Pressed Steel Co., Ltd., has endowed the George Kelley Readership in the Science of Metals, the holder of which (Dr. W. Hume-Rothery, O.B.E., F.R.S.) will be head of the metallurgical teaching staff.

Birmingham University Metallurgical Society

Birmingham University Metallurgical Society celebrates its Golden Jubilee this year, and in honour of the occasion a special enlarged issue of its magazine is to be published in October. Any former member of the Society may obtain a free copy on application to the Editor, Birmingham University Metallurgical Society, The University, Edgbaston, Birmingham 15.

Thirteenth Annual Pittsburgh Diffraction Conference

The Thirteenth Annual Pittsburgh Diffraction Conference will be held on 3 and 4 November 1955, at the Mellon Institute, Pittsburgh, Pa. As in previous years, it is planned to hold sessions on Instrumentation and Methods, Neutron Diffraction, and Metals, with provisions also for papers on general diffraction subjects.

As far as possible it is the practice at the Pittsburgh Conference to give ample time for the presentation and discussion of a limited number of papers. It is the desire of the Conference Committee this year to emphasize diffraction studies of imperfections and phase transformations, and papers pertaining to these subjects will be particularly welcome.

Titles of contributed papers should be sent to the Programme Chairman, Mr. W. L. Kehl, Gulf Research and Development Company, P.O. Drawer 2038, Pittsburgh 30, Pa., before 1 September 1955. Abstracts should be submitted by 20 September.

Advertisement of John G. Stein and Co., Ltd.: Correction

An error occurred in the printing of the advertisement of Messrs. John G. Stein and Co., Ltd., on p. 2 of the April issue of the *Journal*. In the key to the bricks used in the regenerative soaking pit illustrated, the descriptions were unfortunately transposed. The all-black portions of the sectional diagram do in fact represent Stein KM and Stein 73, while the cross-hatched areas represent Stein 50 Nettle Thistle.

APPOINTMENTS VACANT

A FIRM OF CHEMICAL ENGINEERS with works situated in Sussex have a vacancy in their research laboratories for a young metallurgist to work on welding problems. Applicants should be of graduate status, or alternatively Higher National Certificate in Metallurgy or L.I.M., backed by appropriate experience, would be suitable. Salary will depend on age and experience. Pension and profit-sharing schemes are in operation. Please apply to Box No. 394, The Institute of Metals, 4, Grosvenor Gardens, London, S.W.1.

FIRST-CLASS POWDER METALLURGIST with a chemical background and preferably some knowledge of the properties of ceramics and metals at high temperatures and pressures, required by an overseas firm. The successful applicant will be required to settle in an overseas country for a period of at least three years. The salary will be adequate, and the candidate will have the benefits of a medical aid society and a pension fund scheme. Travelling expenses for himself and his family will be refunded. Preference will be given to a candidate who has shown himself to have constructive ideas and an inventive mind. Please state age and give full details as well as telephone number so that appointments for an interview may be made with a representative of the Company when in England in July. Apply in writing to Box No. 392, The Institute of Metals, 4 Grosvenor Gardens, London, S.W.1.

JOSEPH LUCAS LIMITED, Burnley, require a research metallurgist or physicist (graduate) for work on the fundamental properties of materials for high-temperature applications. Some experience of vacuum and metallographic techniques desirable. Salary according to age and experience. Write, giving full details, to Personnel Department, Hargher Clough Works.

METALLURGIST required for Aircraft Research Laboratories. Candidates should hold degree or equivalent, with some industrial experience in at least one of the following: physical testing, foundry technology, thermal treatments, and metallography. Good prospects and salary for suitable applicant. Please write to Box No. 393, The Institute of Metals, 4 Grosvenor Gardens, London, S.W.1, quoting reference M.245.

METALLURGIST required for the Research Department. Candidates should have an honours degree in metallurgy or equivalent qualifications. Industrial experience is not essential, but would be an asset, especially if it was in the fields of engineering or physical research. Successful candidate will obtain wide experience in the application of metallurgical research to mechanical and electrical engineering problems. Write for application form to: The Personnel Manager, Metropolitan-Vickers Electrical Co., Ltd., Trafford Park, Manchester, 17, marking envelope "P.2".

METALLURGIST with good honours degree, preferably with some experience of research, required by British Insulated Callender's Cables, Ltd., at their Shepherds Bush Research Laboratories for investigation of metallurgical problems in the cablemaking industry. Candidate should be in the age range 22–27 years. Five-day week. Pension fund. Applications in the first instance should be in writing,

giving full particulars of age, qualifications, and experience, to Staff Officer, B.I.C.C., Ltd., 21 Bloomsbury Street, London, W.C.1, quoting reference L/97/55.

RADIOLOGIST required to take charge of small X-ray laboratory. Work includes radiography of light-alloy castings and crystallography. Man of degree standard with experience of both types of work preferred. A.I.D. approval desirable but not essential. Contributory pension and life assurance schemes. Apply, stating reference J.M 25, and details of age, qualifications, and experience to Personnel Officer (Staff), Magnesium Elektron, Ltd., P.O. Box No. 6, Lumm's Lane, Clifton Junction, Swinton, near Manchester.

RESEARCH METALLURGIST. Metallurgist required for investigational research work of a fundamental character. Candidates should possess an honours degree in metallurgy. Post-graduate research experience is not essential. The successful candidate will have an opportunity for work (in a well-equipped laboratory) on metallurgical developments associated with steam and gas turbine manufacture and allied electrical equipment. Write for application form to: The Personnel Manager, Metropolitan-Vickers Electrical Co., Ltd., Trafford Park, Manchester 17, marking envelope " Q.2 ".

UNIVERSITY OF BIRMINGHAM

DEPARTMENT OF PHYSICAL METALLURGY

Applications are invited for a lectureship in Physical Metallurgy. The appointment will be in Grade III (salary scale £550 × £25–£600 p.a.) or Grade II (salary scale £650 × £50–£1350 p.a.), according to qualifications and experience. The successful candidate will be required to take up his duties on 1 October 1955. Applications to be sent to the Registrar, The University, Birmingham 15, as soon as possible. Further particulars may be obtained from the undersigned.

G. L. BARNES,
Secretary.

The University,
Birmingham, 15.

UNIVERSITY OF BIRMINGHAM

DEPARTMENT OF INDUSTRIAL METALLURGY

Applications are invited for a lectureship in Industrial Metallurgy. The appointment will be in Grade III (salary scale £550 to £600 p.a.) or Grade II (salary scale £650 to £1350 p.a.), according to qualifications and experience. Some industrial experience desirable, and an interest in one or more of the following: properties and applications of metals, melting, casting, working, and joining of metals. The successful candidate will be required to take up his duties on 1 October 1955, or as soon as possible thereafter. Applications should be submitted without delay to the Registrar, The University, Birmingham, 15. Further particulars may be obtained from the undersigned.

G. L. BARNES,
Secretary.

The University,
Birmingham, 15.

X-RAY DIFFRACTION

The Nelson Research Laboratories invite applications from recent graduates or students graduating this year in

PHYSICS
CHEMISTRY OR
METALLURGY

who are free from National Service liability. This is an opportunity to be engaged in interesting research work in the fields of CERAMICS and METALLURGY. Please apply to Dept. C.P.S. 336/7, Strand, W.C.2, quoting Ref. 1212B.